

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number  
**WO 2005/030212 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 31/4706**,  
C07D 215/54, 405/12, 401/12, 401/14, 405/14, A61K  
31/4709, A61P 29/00, 11/00

Judith [GB/GB]; GlaxoSmithKline, Gunnels Wood Road,  
Stevenage Hertfordshire SG1 2NY (GB). **WOODROW**,  
Michael [GB/GB]; GlaxoSmithKline, Gunnels Wood  
Road, Stevenage Hertfordshire SG1 2NY (GB).

(21) International Application Number:  
PCT/EP2004/010844

(74) Agent: **GIDDINGS, Peter, John**; GlaxoSmithKline, 980  
Great West Road, Brentford Middlesex TW8 9GS (GB).

(22) International Filing Date:  
23 September 2004 (23.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0322722.0 27 September 2003 (27.09.2003) GB

(71) Applicant (for all designated States except US): **GLAXO  
GROUP LIMITED** [GB/GB]; Glaxo Wellcome House,  
Berkeley Avenue, Greenford Middlesex UB6 0NN (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **EDLIN, Christo-  
pher, D** [GB/GB]; GlaxoSmithKline, Gunnels Wood  
Road, Stevenage Hertfordshire SG1 2NY (GB). **EL-  
DRED, Colin, David** [GB/GB]; GlaxoSmithKline, Gun-  
nels Wood Road, Stevenage Hertfordshire SG1 2NY (GB).  
**KEELING, Steven, Phillip** [GB/GB]; GlaxoSmithK-  
line, Gunnels Wood Road, Stevenage Hertfordshire SG1  
2NY (GB). **LUNNISS, Christopher, James** [GB/GB];  
GlaxoSmithKline, Gunnels Wood Road, Stevenage Hert-  
fordshire SG1 2NY (GB). **REDFERN, Tracy, Jane**  
[GB/GB]; GlaxoSmithKline, Gunnels Wood Road, Steve-  
nage Hertfordshire SG1 2NY (GB). **REDGRAVE, Allison**,

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

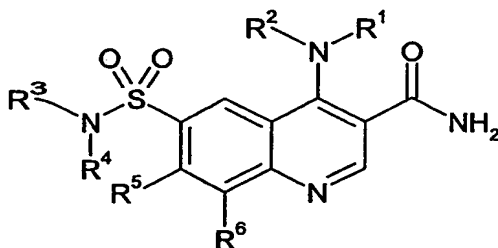
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: 4-AMINOQUINOLINE-3-CARBOXAMIDE DERIVATIVES AS PDE4 INHIBITORS



(I)

(57) Abstract: Compounds of formula (I) or  
pharmaceutically acceptable salts thereof: (I) are  
inhibitors of phosphodiesterase type IV (PDE4)  
and are of use in the treatment of inflammatory  
and/or allergic diseases.

WO 2005/030212 A1